

What is claimed is:

1. A method for treating a bacterial infection comprising:
  - a) determining whether the bacterium causing the infection is capable of enhancing host cell syndecan-1 shedding; and
  - b) administering an effective amount of a compound that inhibits syndecan-1 shedding to a subject suffering from said infection, wherein the compound is selected from (a) inhibitors of a bacterial factor responsible for syndecan-1 cleavage, (b) compounds that bind the syndecan and disrupt cleavage, (c) syndecan-1 decoys, and (d) inhibitors of the host cell shedding mechanism, except when the bacterium is *Pseudomonas aeruginosa*, the compound is not genistein or tyrphostin A47.
2. The method of claim 1, wherein the compound is a hydroxamate derivative or a protein tyrosine kinase inhibitor.
3. The method of claim 2, wherein the compound is a hydroxamate derivative.
4. The method of claim 2, wherein the compound is a protein tyrosine kinase inhibitor.
5. The method of claim 4, wherein the protein tyrosine kinase inhibitor is genistein or tyrphostin A25.
6. The method of claim 1, wherein the compound binds the syndecan and disrupts cleavage.
7. The method of claim 6, wherein the compound that binds the syndecan and disrupts cleavage is an antibody.
8. The method of claim 1, wherein the bacterium is *Pseudomonas aeruginosa*.

9. The method of claim 1, wherein the bacterium is *Staphylococcus aureus*.
10. The method of claim 1, wherein the infection is of the respiratory system, the urinary tract, the skin, the eye (cornea), or bloodstream.
11. A method for treating a *Pseudomonas* or *Staphylococcus* lung infection comprising administering an effective amount of a compound that inhibits syndecan-1 shedding to a subject suffering from said infection, wherein the compound is a hydroxamate derivative, a protein tyrosine kinase inhibitor, or an antibody that binds the syndecan and disrupts cleavage, except the compound is not a protein tyrosine kinase inhibitor when the *Pseudomonas* is *Pseudomonas aeruginosa*.
12. A method of identifying a compound useful in the treatment of a bacterial infection comprising contacting a syndecan-1 containing cell with a candidate pharmacological agent and measuring syndecan-1 cleavage.